Thoughts on the Relevance of Medical History

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Clinicians are, by their very nature, historians—a question remains as to whether and how the history of medicine should be studied as a subject. In recent years medical educators have increasingly answered this question by deleting medical history from the curriculum. But this may be a mistake: among other things of value, medical history provides a much-needed perspective of medical knowledge, and a pigeon holer into which essential new facts—basic, clinical, whatever—can be filed without getting lost. But linear learning, *the piling-on of facts, is more likely to bring exhaustion than comprehension.*

In learning how *ontogeny recapitulates phylogeny*, every medical student is exposed—consciously or not—to nature's historical sense. Tiny nucleic acids predict and define our descendants' descendants, *ontogenizing* and *phylogenizing* each of them. Contemporary molecular history lessons, spanning millions of years, are carried in every cell of our body. But our day-to-day lives are lived in, and sometimes for, the moment; even as scientists we may escape historical awareness. Nor is the future readily appreciated when the past, which will produce it, is not remembered. This very human phenomenon may have particular relevance for physicians and the things physicians do. Or so physician-historian Ilza Veith MD apparently thought in noting nearly 30 years ago that "the science of medicine... sometimes appears to think of itself as having been generated spontaneously and as being without a history."[1]

But it can be argued that physicians are, and must be, historians if we successfully practice the art, that we may have more of a historical sense than we realize. For example, one of our most basic skills is taking a medical history. In doing so we investigate not one patient, but 100 patients from the past. We write: "Mr Kane, a WDWN 32-year-old Hawaiian male...", but also discover Mr Kane, the 22-year-old man who tore a knee ligament in the BYU football game; Joe Kane, the 16-year-old boy who stuck that first cigarette in his mouth after class; Joey Kane, the five-year-old boy who got his last tetanus shot after stepping on a pop top; Joseph Kalani Kane, the day-old infant with the reaction to silver nitrate. Nor does the physical examination escape the subsumption of history: a scar that betrays a prior operation; a word written in a tattoo; a nicotine stain on the first and second fingers, right hand; a hard liver edge; actinic keratoses. Each represents the physician's discovery of the past; acceptance of the truth that to care for the patient today, the patient of the past must be examined too.

Our patients' historical experiences become our own historical lessons. In practicing medicine over a span of time we develop and organize an encyclopedia of these lessons, and draw on them repeatedly. Most of us have even unconsciously archetyped particular patients who have made some impression; patients who have come to symbolize lessons that must be recalled and reused. We may remember, for example, the obviously well infant on whom we did the spinal tap (anyway), and our amazement at finding all those white blood cells under the microscope. We are now more likely to tap the next patient if meningitis seems even remotely possible. We also find that lessons from our most recent patients disproportionately influence clinical decisions. Mrs Morinaga was unexpectedly found to have papilledema on routine examination last week. This week, you will look particularly carefully at everyones' *eye grounds*. Such actions characterize our awareness of history in clinical practice: yesterday's experiences suggest what could happen tomorrow. History lessons become part of every physician's professional encyclopedia.

Physicians conceptualize not only clinical experiences, but also the lives of patients and of diseases along *time lines*. The time line, usually drawn as a horizontal arrow pointing to the right, is a device used in logic to demonstrate temporal associations between distinct events. In the case of a human life, the line might begin at the left, with birth, and end at an arrow tip on the right, with death. The arrow moves, from left to right, as time moves. In between, on the arrow itself, we mark off events of importance, such as an operation, an illness, a mammogram, low blood sugar. We arrange the relevant personal and health events of individual patients along this time line, and we perceive the manner in which the progress of time connects and separates these events. We also learn the natural history of every disease: all of the hard facts in Cecil & Loeb, ordered and arranged by time's evolutionary unfoldings. We examine association and causation along this line: Mr Kane started his pack-a-day habit at age 16; today he has severe bronchitis. Even if we examine the patient at only one point in time, we seek to investigate, imagine, and understand what came before and what is likely to follow. We must do so if we are to diagnose, prognosticate, inform and counsel patients, select treatments, and recommend preventive measures.

We adopt other historical perspectives as well. We attempt to understand human diseases of complex etiology. We go beyond the one-dimensional limitations of the time line in learning how diseases result from the interactions of agent, host, and environment (traditionally depicted in textbooks by an isosceles triangle, with each of the three disease-producing factors occupying one of the apices). We thus understand that diseases do not result merely from *linear* processes, but from *complex webs of causation* that cannot be conceptualized one-dimensionally. What caused Mr Kane's myocardial infarction? Cigarettes? Obesity? A sedentary life-style? Hypertension? Job stress? Marital stress? High LDL? High LDL:HDL ratio? Too many beers? Chronic hyperglycemia? Family history? We may decide that while it is all of those things, it is not any one of them alone. It is such a causal web that we refer to in saying that a condition is *of multifactorial etiology*. Similarly, in arriving at a diagnosis we mix and assemble, shuffle and remix facts into a coherent picture. Hawaii medical philosopher Kenneth Kipnis has called this decision process *the recognition of patterns*, to

distinguish it from decision making by algorithm. It, too, is part of our historical sensibility.

This historical orientation of ours allows us to *think clinically* because it is about the integration of facts. Physicians must ultimately decide and act, which means we must be able to sort and prioritize facts and provisional conclusions, run scenarios and algorithms inside our heads, test our conclusions, repudiate, reconfigure, hypothesize, retest, look for consistencies and inconsistencies, update our ideational data bases, and rerun our programs over and over again. This is how clinical decision making proceeds. Our historical orientation involves systematic approaches and broad experience. It deals not with superficialities, but generalized detective skills applicable to clinical medicine. Is it coincidence that medical historians have for centuries been among the greatest clinicians, eg, Thomas Sydenham, Robert Willan, Sir William Osler, Harvey Cushing, and the greatest medical thinkers, eg, Kurt Sprengel, John Snow?

The fuller our historical perspectives, the easier it becomes to learn, retain, and apply the everchanging knowledge that keeps our clinical art current. There is a prevalent illusion that if we can only chase the minutiae down one more alley we may at last arrive at a clinician's nirvana of *total knowledge*. This illusion is especially seductive when burgeoning technical advances provide a continual supply of new facts to find.

Facts may not stick unless they have something to stick to. Try learning a foreign language by memorizing successive words in a dictionary. Imagine this task without knowledge of the parts of speech. Richard Armour's hackneyed example of memorizing without comprehending is instructive. It was comparatively easy for Armour to learn that *in 14 hundred and 92, Columbus sailed the ocean blue*, until he began to suspect that maybe *in 14 hundred and 93, Columbus sailed the deep blue sea.* (And what about Leif Erickson?) What we know and learn, in a complex and ever-moving field, is determined by the architecture and organization of the bases of our knowledge, much as the roots of a tree determine whether branches will branch off, and how fully leaves will grow. As one physician put it: history is not the accumulation of *facts*, but rather is the way that those facts relate to each other.[2] Or another: the emphasis is on a web of connection rather than on discrete entities—on the meaning of facts in relation to historical patterns, configurations, and processes, not as absolutes in themselves.[3] Medical history can still serve as an organizing matrix, a foundation upon which comprehensive medical knowledge and skills are built.

Finally, we might ask what part and place remains for medical history in Hawaii? Living in the state with the briefest human habitation, it might be wrongly assumed that our history—including our medical history—should be the least relevant. That this may not be the case is apparent to anyone who reads the newspapers. As residents of Hawaii, we live in a present directly connected to the past, and demanding that the future evolve logically from it. We are continually reminded how, within the span of roughly 200 years *Hawaii nei* went from a collection of tribal states, to a kingdom, to a U.S. territory, to a state. Not only are the facts of this history still disputed, but even those facts accepted are presented in evidence of opposing conclusions that seem to mandate opposite actions. Hawaii is a state, a sovereign nation, or an abstract concept, depending on your reading of history. Its people are victims or rescuees, liberators or oppressors, visitors or trespassers, depending on your historical perspective. A better example of the fluid relevance of history, the continuum of past, present, and future, would be hard to find.

Hawaii's general history might appear irrelevant to medicine, but the climate of historical examination should at least encourage us to search our medical past for lessons obscured by dust and distance. What of leprosy? Does the history of stigmatization tell us anything about HIV infection today? What of the many health problems of Hawaii's native peoples? Of recent immigrants? Do they reveal weaknesses in our health care system? In our values? Do they provide litmus tests for the successfulness of the health care we provide? Why does retired microbiologist Ozzy Bushnell turn the pages of medical history to track the diseases that killed Hawaii's people 150 years ago? Why does Laurence Stuppy, a California surgeon, return to pick up the threads of a Honolulu epidemic he investigated 52 years ago? Why do Hawaii's libraries expand to shelve books by authors long deceased, on subjects since altered and updated? Why do scholars and physicians and students unsettle the dust on these old books? Some of these questions will hopefully be answered in the pages of this volume.

As Osler viewed it, and as modern historians view it still, medical history moves and changes inexorably as a living, breathing, dynamic and rambunctious process. It must not be an antiquarian product to be served up with crumpet cakes and tea; nor the sludge of decomposing medical knowledge; nor a dustbin for discarded ideas. Rather, medical history is a black bag containing the instruments of the past, present, and future; a dimension within which medical knowledge serves the art. As physicians each of us can, and probably should from time to time, re-explore some of its useful and fascinating lessons.

When we uncover history, we discover ourselves. Who we are, what we have achieved, where we are going. Where we must go.

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